

SERVED: December 23, 1996

NTSB Order No. EA-4516

UNITED STATES OF AMERICA  
**NATIONAL TRANSPORTATION SAFETY BOARD**  
WASHINGTON, D.C.

Adopted by the NATIONAL TRANSPORTATION SAFETY BOARD  
at its office in Washington, D.C.  
on the 20th day of December, 1996

_____	)	
LINDA HALL DASCHLE,	)	
Acting Administrator,	)	
Federal Aviation Administration,	)	
	)	
Complainant,	)	
	)	Docket SE-14116
v.	)	
	)	
WAYNE R. LA LIBERTE,	)	
	)	
Respondent.	)	
_____	)	

**OPINION AND ORDER**

The Administrator and the respondent have both appealed from the oral initial decision, issued by Administrative Law Judge William A. Pope, II, on September 29, 1995, at the conclusion of an evidentiary hearing.<sup>1</sup> By that decision, the law judge affirmed the Administrator's order, suspending respondent's Airline Transport Pilot Certificate on allegations that he violated sections 121.315(c) and 91.13(a) of the Federal Aviation

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<sup>1</sup> An excerpt from the hearing transcript containing the initial (continued...)

Regulations (FAR), 14 C.F.R. Parts 121 and 91, by failing to follow a fuel loss abnormal checklist procedure that required the shut down of the leaking engine.<sup>2</sup> The law judge, however, set aside the 120-day suspension ordered by the Administrator because respondent filed a timely report of the incident underlying the allegations in accordance with the provisions of the Aviation Safety Reporting System (ASRP). For the reasons that follow, we will grant respondent's appeal and set aside the Administrator's order.

On August 4, 1994, respondent was pilot in command of Delta Air Lines Flight 36, a Lockheed L-1011 operating from Cincinnati, Ohio, to London, England (Gatwick Airport). Respondent has been a Delta pilot for more than 31 years. He has over 21,000 hours of flight time, 18,000 of them as pilot in command. He has been an L-1011 captain since 1992. The first officer was Greg Hoggatt. The second officer was David Browning. Respondent had never flown with either of them prior to this incident.

Mr. Browning was the first witness, called on behalf of the Administrator. Mr. Browning had been an L-1011 flight engineer

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(...continued)  
decision is attached.

<sup>2</sup> FAR §§ 121.315(c) and 91.13(a) provide as follows:

**"§ 121.315 Cockpit check procedure....**

(c)[A]pproved [cockpit] procedures must be readily usable in the cockpit of each aircraft and the flight crew shall follow them when operating the aircraft.

**§ 91.13 Careless or reckless operation.**

(a) *Aircraft operations for the purpose of air navigation.* No person may operate an aircraft in a careless or reckless manner (continued...)

for about one year at the time of the incident, and he had logged about 700 hours on this type aircraft. Mr. Browning testified that at 0820 zulu hours on the day in question, when the aircraft had just reached the top of descent, at an altitude of 37,000 feet and 125 statute miles from Gatwick, he noticed that the number one fuel tank gauge appeared to be decreasing at an abnormal rate. He believes the aircraft had 38,000 pounds of fuel remaining, with 12,000 in the number one tank, 13,000 in the number two left and number two right tanks combined, and 13,000 in the number three tank. Mr. Browning advised respondent and recommended that they refer to the fuel gauge malfunction checklist. Respondent agreed, and instructed the first officer to follow the checklist procedures while he (respondent) took control of the aircraft and radios.

Mr. Browning testified that he and first officer Hoggatt confirmed that the fuel gauge was operating properly. They advised respondent of this finding and then recommended that the rapidly decreasing fuel checklist be consulted. Respondent agreed. However, when respondent was told that this checklist next called for the shut down of engine number one (see Administrator's Exhibit 1), he declined to do so. According to Mr. Browning, respondent never explained to the crew why he would not complete the checklist procedures. As the flight started its descent into Gatwick, respondent instructed Mr. Hoggatt to request priority handling by air traffic control. Air traffic

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(...continued)

so as to endanger the life or property of another."

control replied that priority handling was not available. Respondent declared an emergency.<sup>3</sup>

Mr. Browning identified Administrator's Exhibit 3 as the route of flight document utilized by the non-flying pilot to track the progress of the flight. He explained that the computer-generated times indicate when the aircraft is expected to reach each way point of the route. The non-flying pilot is supposed to write in the actual time each way point is reached, during the course of the flight. This flight plan also indicates the amount of fuel that should be remaining as the aircraft reaches specified points in time. Again, Mr. Browning testified, the non-flying pilot is required to write down the actual fuel status for each specified time, so that the crew is able to determine whether they are ahead or behind in fuel, and ahead or behind in time. According to Mr. Browning the entries on A-3 were made by Mr. Hoggatt. However, he testified, the fuel readings that Mr. Hoggatt entered were provided to Mr. Hoggatt by Mr. Browning, because it was difficult for Mr. Hoggatt to see the flight engineer's panel.

Mr. Browning also identified Respondent's Exhibit 2 as the fuel record that he prepared. Mr. Browning testified that it was his duty to record the actual fuel remaining at certain times during the flight. According to this exhibit, at 0742 zulu hours, 55,100 pounds of fuel remained; 18,300 pounds in the number one tank, 18,400 in the number three tank, and 9,200 in

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<sup>3</sup> There is no dispute concerning the propriety of declaring an (continued...)

each of the number two tanks. There is no entry in the flight plan (Administrator's Exhibit 3) for actual fuel remaining at 0742 zulu hours. At 0720 zulu hours, there is an entry on Administrator's Exhibit 3 that 58,800 pounds remained. At 0834 zulu hours, Exhibit 3 shows that top of descent had just been reached and that 45,200 pounds of fuel remained.

Mr. Browning testified that he continuously monitored the aircraft's fuel quantity during the entire descent, and he kept respondent apprised of the fuel status. He explained that he allowed each engine to be fed by its respective tank to insure that the aircraft would have the minimum amount of fuel, 12,000 pounds, required to land. At 18,000 feet, the respondent called for the descent checklist. Mr. Browning testified that at that time the aircraft had about 21,000 pounds of fuel remaining and the two boost pump lights on tank number one illuminated, indicating it was empty. Mr. Browning then unlatched and cross-fed the valves, so he could keep all three engines running. According to Mr. Browning, he again asked respondent to reconsider shutting down engine number one, and again respondent said no, stating only that he was not comfortable with shutting down the engine, without offering any further explanation.

On final approach, air traffic control called and advised that they could see misting from engine number one. Respondent requested that emergency equipment be made available. After landing and taxiing the aircraft, engine number one was shut

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(...continued)  
emergency in this case.

down. The aircraft arrived at the gate at 0854 zulu hours with 14,700 pounds of fuel remaining instead of the targeted gate arrival amount of 32,400 pounds. (Respondent's Exhibit 1).

Mr. Browning testified that he was concerned with keeping the number one engine running because there was the danger of fire as well as the continued loss of fuel. However, he did not argue with respondent because he did not believe that safety was jeopardized. (TR-121). He testified that if he had shut down engine number one, turned off the boost pumps for tank number one and then opened the cross-feed valves, he could have stopped the leak and balanced the fuel during the descent by allowing fuel tank number three to feed the engines until all three tanks were balanced because of fuel burn off.<sup>4</sup> Mr. Browning admits, however, that he does not know if he could have corrected the imbalance because of the time restraints involved in this particular situation. (TR-160-161). On cross-examination, he testified that he has no experience as a flight engineer in an out-of-balance aircraft, nor is he a mechanic. According to Mr. Browning, the crack in the fuel line, when he examined it after landing, was 1" in length, and ¼" wide.

First Officer Greg Hoggatt also testified for the Administrator. He has been employed with Delta for ten years. He had just recently returned to the flight line as an L-1011 first officer, and had approximately 300 hours in that position. Prior to that time he had been a Delta second officer instructor

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<sup>4</sup> The L-1011 aircraft, according to evidence in the record, does not have the capability of transferring fuel between the tanks.

on the L-1011. Mr. Hoggatt recalls that the aircraft was about 130 miles outside of London, just before the top of descent, when Mr. Browning alerted the crew that the number one fuel gauge was low. The flight was no more than 20 to 30 minutes from landing. Mr. Hoggatt testified that respondent did not discuss why he did not want to shut down the engine. In Mr. Hoggatt's view, respondent did not want the crew's input. All respondent cared about was whether there was sufficient fuel to land. Mr. Hoggatt testified that respondent asked about fuel quantity several times.

Mr. Hoggatt testified that he did not argue with respondent. He explained that he believes that the reasons for the checklist are to prevent engine fires and to conserve fuel. Since the flight was so close to the airport, he saw no need to challenge respondent's decision. Moreover, he testified, respondent was very focused on flying the airplane, during a critical phase of flight. Mr. Hoggatt also viewed the crack after landing, and he saw a 4 or 5" long crack that was  $\frac{1}{4}$ " wide. There was also a dent on one side of the crack.

Respondent testified that when he learned of the fuel loss his top priority was to land as soon as possible and as safely as possible. He testified that when the first officer alerted him to the problem he looked at the gauges himself. Respondent insists that he observed 2,000-3,000 pounds remaining in tank number one. He believed that he had already lost 9,000 pounds of fuel, and that he had a severe out-of-balance condition because Delta's operating manual for the L-1011 states that the maximum

imbalance permissible is 1,500 pounds.

Respondent testified that he brought the number one engine back to idle, but allowed the descent to gradually accelerate the aircraft.<sup>5</sup> He testified that he then performed a risk assessment. He reasoned that since there had been no fire yet, an engine fire was not likely, particularly at high altitude. He also knew that there was a fire detection and suppression system in this particular aircraft engine, so there would be a warning if a fire did occur and he could then shut down the engine. He was most concerned that his aircraft was way out of tolerance regarding the imbalance. He feared that he could have flight control problems during the landing. Having the engine number one running would be an asset in such a situation. He also knew that he could shut down the number one engine at any time, but once done there would be little time to restart it.

Respondent explained that he once had to land a 727 aircraft with a 5,000 pound fuel imbalance, so he knew firsthand that he could be confronted with a control problem. Also, a friend of his had been killed while trying to control an out-of-balance aircraft. Respondent testified that this checklist was intended to conserve fuel and he knew he had enough fuel to land the aircraft. He testified that he had never before not followed a checklist, but he did not think the checklist was applicable to his circumstances. Had they been at a different phase of the flight his response would have been different. Respondent

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<sup>5</sup> Respondent testified that he accelerated to 350 knots to keep the air moving through the engine.



decided that keeping the number one engine running was the safest course of action. Furthermore, respondent testified, he believed he was complying with the law and company policy by exercising his ultimate authority as pilot in command in an emergency situation. Respondent filed a timely report of the incident with NASA, in accordance with the ASRP.<sup>6</sup>

Respondent presented the testimony of several expert witnesses. Donald Arthur Moor has been an L-1011 test pilot for Lockheed since 1970. He has approximately 10,000 hours of flight time, 6,000 of which are in an L-1011. He confirmed that there is nothing in the Lockheed manual to address large fuel imbalances.<sup>7</sup> Had he been faced with such an imbalance and not known how the aircraft would handle under the circumstances, he might have done what respondent did and not shut the number one engine down. (TR-303). Mr. Moor also discounted the danger of fire, citing the same reasons cited by respondent. Mr. Moor testified that if respondent had been over the middle of the ocean at the time he learned of the leak, fuel conservation would have been of paramount consideration. Moreover, if the crew had two or three hours, they could balance the engines by fuel burn. However, under the circumstances here, with the flight about to land at Gatwick, fuel conservation was not a priority. In Mr.

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<sup>6</sup> The Administrator appealed the law judge's decision to apply the terms of the ASRP in respondent's favor. Since we have determined that the order should be set aside in its entirety, we will not address this issue.

<sup>7</sup> He determined later from other Lockheed engineers that the imbalance would not have caused a control problem. Mr. Moor testified that if he did not know this, he could not imagine how (continued...)

Moor's view, checklists do not cover every abnormality.

"Sometimes, you just need to use basic airmanship." (TR-333).

Captain John Cable also testified for respondent. He is a retired Delta L-1011 captain with 18,000 hours of flight time. He testified that he would be reluctant to give up an engine almost anytime. Having not been there, he could not say how he would have acted under the circumstances, but in his opinion, respondent's decision was not unreasonable.

Captain William Rawlins Clark has been a Delta pilot since 1961. He has been an L-1011 captain for over 10 years, and has about 15,000 hours of total flight time. He was a check airman instructor on the L-1011 for seven years, and was the program manager for the L-1011. Captain Clark testified that a checklist is a guide to stabilize an abnormal condition, but a pilot in command is not always required to follow a checklist where, in his judgment, there is a better option. Captain Clark testified that the purpose of this particular checklist is fuel conservation, and since the leak occurred at the top of descent, and because a pilot should not carelessly get rid of a perfectly good engine, he would be reluctant to simply shut it down because a checklist calls for it. From what he knows of the circumstances, he might have done the same thing as respondent.

Finally, respondent presented the testimony of Joseph Bracken, a staff engineer with the Air Line Pilots Association (ALPA). Mr. Bracken reported that the size of the crack in the

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a Delta pilot would have known. (TR-328).

fuel line was subsequently measured by the manufacturer, and it was 2½" long and ".81,000<sup>th</sup>"<sup>8</sup> of 1" wide at its base. Using these dimensions with the specific gravity of the fluid and estimated pressure differentials, he calculated the leak rate to be 83 pounds per minute at sea level, 183 pounds per minute at 37,000 feet cruise level, and 93 pounds per minute average during the descent. He indicated that between 2,000 and 2,500 pounds might have been leaked during descent, and that total engine burn during this period would have been approximately 4,300 pounds. Thus, in his expert opinion, the testimony of the first and second officers concerning the amount of fuel remaining when they first noticed the leak was not credible.<sup>9</sup>

In rebuttal, the Administrator recalled Mr. Browning, who insisted that the number one tank was only 1,000 to 2,000 pounds less than the number three tank at the time he noticed the problem, though he admitted on cross-examination that he wrote his statement eight days after the event, and that he had not made notes contemporaneously. Mr. Hoggatt was also recalled. He states that he "glanced" at the gauges himself, but claims that he was too busy to note the actual figures. He testified that if there was an imbalance, he recalls that it was very slight.

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<sup>8</sup> It may be assumed that this is .081 of an inch.

<sup>9</sup> Under the Administrator's apparent theory of the case -- onset of a rapid leak at or near the top of the descent to Gatwick -- approximately 23,000 pounds of fuel needed to have been burned or leaked during descent. As the burn stays constant under any theory, the Administrator needed to account for a leak conservatively placed at in excess of 15,000 pounds, requiring a rate of loss many multiples faster than the physical evidence seemed to support.

Joseph Bracken, the ALPA engineer, was recalled by the law judge. He testified that if the flight crew's figures were correct, the rate of leak had to be 1,300 pounds per minute, and that this was not scientifically possible based on the size of the crack in the fuel line.

Finally, retired FAA Inspector Joseph Dillon testified for the Administrator. He had been the FAA air crew program manager assigned to Delta Air Lines for the L-1011 for seven years. Inspector Dillon has approximately 4,000 hours of flight time, acquired predominantly during military service. He has 20 hours in an L-1011, none as pilot in command. Although Inspector Dillon acknowledged that a pilot in command has the authority to deviate from a checklist when it does not apply, in his opinion, respondent's decision was not prudent because of the unknown fire potential, lost fuel, and the fact that respondent's actions, in his opinion, actually made the fuel imbalance worse. Inspector Dillon testified that the aircraft could have landed in a safer manner, had the checklist been followed. (TR-494).

Respondent's Exhibit R-5, a portion of the Delta L-1011 Operating Manual, sets forth the emergency procedures for that particular aircraft but states at the outset, "If an emergency exists for which these procedures are not adequate or applicable, the Captain's best judgment shall prevail." Respondent's Exhibit R-6, the Normal Procedures section of the L-1011 operating manual, states that "if an abnormal situation or emergency exists, the procedures and checks described are not intended to

limit or restrict the command authority of the Captain."<sup>10</sup>

#### The Law Judge's Decision

The law judge recognized that there was a discrepancy between the testimony of Mr. Browning and respondent concerning the amount of the fuel imbalance when the leak was first noticed. The law judge acknowledged that Mr. Browning's testimony could not be reconciled with the computations made by respondent's expert engineering witness, Mr. Bracken. Finding, however, that everyone was truthful and no one had a motive to lie, he determined that Mr. Hoggatt's notation on the flight plan that there were 45,000 pounds of fuel remaining at the top of descent, made during the flight, was the most reliable indicator of the amount of fuel remaining. The law judge concluded that respondent was mistaken in his belief that there was a 9,000 pound fuel imbalance. The law judge did find respondent's testimony that he went through a risk assessment process credible.

The law judge then cites FAR 121.557(a), which permits the pilot in command to deviate from prescribed procedures in an emergency, but states that Board precedent requires that in order

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<sup>10</sup> Respondent's Exhibit 4, the Delta Flight Operations Policy Manual, Chapter 18-3, **Emergencies**, establishes procedures for flight crews to follow in the event of an emergency. The Manual provides, however, that the "flight crew is expected to use initiative and good judgment when strict adherence to these rules is not the best course of action under the circumstances." This section of the manual also quotes the language of FAR § 121.557(a), which provides in part, "In an emergency situation that requires immediate decision and action, the pilot-in-command may take any action that he considers necessary under the circumstances."

to be exculpatory, the deviation must have been necessary to meet that emergency. The judge concludes that since respondent's decision to deviate from the abnormal procedures requirement to shut down the engine was not necessary to meet the emergency of a fuel leak, it was not a reasonable decision. Concluding that respondent was not "privileged to substitute his judgment for that of his employer," the law judge upheld the violations as charged. Since he found that respondent did not intend to violate the FAR, he waived the sanction under the provisions of the ASRP.

#### Findings and Conclusions

For the reasons that follow, we conclude that the law judge's decision should be reversed, and the Administrator's order set aside. Critical to our view is the uncertainty we believe exists over the amount of fuel which had been lost before the leak was first identified. Respondent's defense is premised on the argument that weight imbalance was his primary concern. The countervailing dangers are fire and fuel exhaustion. All three of these will be impacted by the rapidity of fuel loss, as a slow leak of some duration could have measurably affected weight, while a gushing leak of recent origin threatens not only fuel supply, but may heighten concern over fire. The law judge found that 45,000 pounds of fuel remained at the time the leak was noticed. To make this finding, the law judge accepted a notation allegedly made at the top of descent by the first officer, but on which there was no dispositive testimony. (The Administrator's other witness, the second officer responsible for

fuel monitoring, testified to 38,000 pounds remaining at top of descent.) We do not find defensible the law judge's determination on this point, as his finding implies a very rapid leak, discovered shortly after onset, a scenario contradicted by the actions of the flying pilot, the point in time at which the number one tank became fully exhausted, and the unrebutted expert testimony regarding the capacity of the leak.<sup>11</sup>

On this record there are, in fact, no credible burn and leak combinations which would account for the loss of 30,000 pounds of fuel in the short duration of flight subsequent to the discovery of the leak. Consequently, we conclude that onboard fuel at the time the leak was discovered may have been significantly below forecast and that respondent may well have been confronted with a substantial fuel imbalance from the outset. Certainly, a preponderance of the evidence supports the proposition that he had a reasonable belief that such an imbalance existed, so it is against this perception that we will weigh his subsequent decisions.

We agree with the Administrator that abnormal checklist procedures were developed to be followed in the event of an abnormal condition, so that a pilot is able to devote his full attention to operating the aircraft and avoiding a disaster.

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<sup>11</sup> Mr. Bracken testified that the leak rate for the crack measured by the manufacturer was 83 pounds per minute at sea level and 183 pounds per minute at 37,000 feet cruise level. Thus, if 45,000 pounds of fuel remained at 0834 and the aircraft taxied to the gate with 14,700 pounds at 0854, 30,300 pounds of fuel would have been lost in approximately 20 minutes. Using the rates of loss calculated by Mr. Bracken, such a rapid loss would have been impossible.

In Administrator v. Butler, 7 NTSB 735 (1991), respondent was similarly charged with failing to follow an abnormal checklist procedure. While on final approach, one minute prior to landing, he was informed by his first officer that the gear door open light remained on after deployment of the landing gear. Rather than following the checklist procedure which would have required him to execute a missed approach and go-around, he decided to deviate from the checklist and to land, reasoning that there were dangers inherent in performing a go-around, such as the possibility of engine failure. The Board disagreed and found that the pilot's decision that the checklist procedure did not apply to his circumstances was not reasonable, because the pilot in that case was concerned with an engine failure on go-around, when he had no evidence of engine trouble. Id. at 737. Still, implicit in the reasoning of Butler is the proposition that where there is evidence of a complicating factor, departure from a checklist may be acceptable.

The complicating factor here is, we think quite evidently, a not unreasonable apprehension of control instability at slower, landing speeds. The record supports the following propositions: (1) respondent believed that there was a significant fuel loss prior to discovery; (2) respondent knew of the manufacturer's recommended 1,500 pound limitation on imbalance; (3) respondent had not been trained nor informed regarding the response of his aircraft to the perceived weight imbalance; and (4) there were no satisfactory procedures to correct the imbalance that would not have aggravated other risks. Given these propositions, the



question is, under applicable standards, whether departure from the emergency fuel loss checklist is permissible.

The Administrator argued, and the law judge adopted in his initial decision, the application of the rule contained in FAR section 91.3, that the determination of whether respondent's decision to deviate from the checklist depended on whether respondent's actions were necessary to meet the emergency. Respondent, however, is an airline pilot, whose actions are governed as well by the carrier's operations manual and FAR § 121.557, both of which address the problem in terms of actions necessary under the circumstances and as required in the interests of safety. We think that, in the circumstances of this case, it matters little which of these formulations is thought to apply. Respondent was presented with a fuel loss difficulty (weight imbalance and potential control instability) which he reasonably believed was different from the fuel conservation concerns that had driven the checklist procedures calling for an engine shutdown. His decision to retain the available engine at idle power was, by a preponderance of evidence in this record, designed to meet this emergency. While we may believe, after the fact, that instability problems might not have been dramatic, we cannot fault respondent's logic, given the information available on allowable limits and the lack of information or training on the consequences of exceeding them quite significantly. Hence, we believe his departure from the checklist to have been justified under all applicable standards.

Finally, we disagree with the law judge's finding that respondent's actions were careless. We recognize that the law judge's finding of carelessness is premised on his finding of a violation of FAR section 121.315(a) (I.D. at 594), and that the issue is rendered moot by our reversing the finding of a violation of FAR section 121.315(a). Nevertheless, we think it appropriate to comment here on the additional implications of the charged violation. Whatever may be thought of the precise quality of respondent's decision to choose reserve power and face the risk of fire, it seems clear on the record that respondent was fully engaged in the care of the passengers and equipment entrusted to him. Just as it is possible to be right by happenstance, it is possible to be wrong without being careless, and the charging of careless flight, with the inevitable professional and personal consequences that attach to such a charge, needs itself to be weighed carefully. Perhaps the willingness of this Board to find a "residual" violation of Part 91.13(a), where an operational violation is established, has encouraged a routine practice of inclusion of the 91.13(a) charge. It would be unfortunate if this were done without reason or need. Here at least, the record establishes that respondent declared an emergency, undertook a risk assessment, carefully monitored fuel supply, and carried extra speed for an aerodynamic margin throughout the landing -- all actions consistent with a deliberate intention to land safely. The only dispute is over a judgment call, consciously made, which, even if taken in the worst light for respondent, still has an understandable and

plausible basis reflecting respondent's concern for the safety of flight. To sustain a charge of careless flight in these circumstances would be tantamount to a determination that, while the pilot in command of an aircraft is expected and permitted to exercise his or her judgment in emergency circumstances, to do so incorrectly will not simply be a fact of human error, but of careless disregard for safety. We do not adopt such an approach, and find no basis in this record to sustain a charge of carelessness.

**ACCORDINGLY, IT IS ORDERED THAT:**

1. The Administrator's appeal is denied;
2. Respondent's appeal is granted;
3. The law judge's initial decision is reversed; and
4. The Administrator's order is dismissed.

HALL, Chairman, FRANCIS, Vice Chairman, HAMMERSCHMIDT, GOGLIA, and BLACK, Members of the Board, concurred in the above opinion and order. FRANCIS, Vice Chairman, submitted the following statement:

I concur in this opinion for its affirmation of the authority of the pilot-in-command to make rational and reasonable decisions regarding the operation of the aircraft -- particularly in an emergency. The pilot-in-command certainly has, and should exercise, the authority to deviate from general procedures in limited and appropriate circumstances because not every procedure or checklist can respond entirely to every emergency. The ability to respond to an emergency and depart from mechanical and dogmatic responses to checklists and automation should not, however, be read as permission to ignore the collective wisdom of the aviation community that is embodied in established procedures and checklists. I commend the captain's attention to the safety of the passengers and the aircraft displayed by the record in this case.